

```

1  GTCTTCCACCATGCATCGCTGGGCTTCTTCTCTGTGGCGTGTCTCTGCTCGCCGCTG 60
   +-----+-----+-----+-----+-----+-----+
   CAGGAAGGTGTACGTAGCGACCCGGAAGAAGACACCGCACAAAGACAGACGCGCGAC
       M H S L G F F S V A C S L L A A A -
61  CGCTGCTCCGGGTCTCGGAGGCGCGCGCGCGCGCGCTTTCGAGTCCGGACTCG 120
   +-----+-----+-----+-----+-----+-----+
   GCGACGAGGCCAGGAGCGCTCCGGGGGGGGGGGGCGGCGGAAGCTCAGGCGCTGAGC
       L L P G P R E A P A A A A A F E S G L D -
121 ACCTCTCGGACGGGAGCGCGGCGGCGGCGGCGGCTTATGCAAGCAAGATCTGG 180
   +-----+-----+-----+-----+-----+-----+
   TGGAGAGCCCTGGGCTGGGCTGGCGCGCTCCGGTGCCGAATACGTTCGTTCTAGACC
       L S D A E P D A G E A T A Y A S K D L E -
181 AGGAGCAGTTACGGTCTGTGCCAGTGTAGATGAACCTCATGACTGTACTCTACCCAGAAT 240
   +-----+-----+-----+-----+-----+-----+
   TCCTCGTCAATGCCAGACACAGGTCAACATCTACTTGTAGTACTGACATGAGATGGGTCTTA
       E Q L R S V S S V D E L M T V L Y P E Y -
241 ATTGAAAAATGTACAAGTGTACGCTAAGGAAAGAGGCTGGCAACATAACAGAGAACAGG 300
   +-----+-----+-----+-----+-----+-----+
   TAACCTTTTACATGTTACAGTCGATTCTCTTCTCCGACCGTTGTATTGTCTCTTGTC
       W K M Y K C Q L R K G G W Q H N R E Q A -
   CCAACCTCAACTCAAGGACAGAAGAGACTATAAAATTTGCTGCAGCACATTATATACAG

```

MATCH WITH FIG. 1B

FIG. 1A

MATCH WITH FIG. 1B

661 TTTACAGACAAGTTCATTCCATTATTAGACGTTCCCTGCCAGCAACACTACCACAGTGTC 720
 AAATGCTCTGTTCAAGTAAGGTAATAATCTGCAAGGGACGGTCTGTTGTGATGGTGTACAG
 Y R Q V H S I I R R S L P A T L P Q C Q -
 721 AGGACGCAACAAGACCTGCCCCACCAATTACATGTGGAATAATCACATCTGCAGATGCC 780
 TCCGTCGCTTCTTGACGGGGTGGTTAAATGACACCTTAATAGTGTAGACGCTCTACGG
 A A N K T C P T N Y M W N N H I C R C L -
 781 TGGCTCAGGAAGATTTTATGTTTTTCCTCGGATGCTGGAGATGACTCAACAGATGGATTCC 840
 ACCGAGTCCTTCTAAAATACAAAAGGAGCCCTACGACCTCTACTGAGTTGTCTACCTAAGG
 A Q E D F M F S S D A G D S T D G F H -
 841 ATGACATCTGTGGACCAACAAGGAGCTGGATGAAGAGACCTGTCTCAGTGTGTCTGCAGAG 900
 TACTGTAGACACCTGGTTTGTTCCTCGACCTACTTCTCTGGACAGTCCACACAGACGCTCTC
 D I C G P N K E L D E E T C C Q C V C R A -
 901 CGGGGCTTCGGCCTGCCAGCTGTGGACCCCAAGAACTAGACAGAACTCATGCCAGT 960
 GCCCCGAAGCCGGACGCTGACACCTGGGGTGTCTTGTGATCTGTCTTTGAGTACGGTCA
 G L R P A S C G P H K E L D R N S C Q C -
 961 GTGTCTGTAAAAACAACACTTCTCCCCAGCCCAATGTGGGGCCCAACCGAGAATTGTATGAAA 1020
 CACAGACATTTTGTGAGAGGGGTGCTTACACCCCGGTGGCTCTTAAACTACTTT

MATCH WITH FIG. 1D FIG. 1C

MATCH WITH FIG. 1C

```

V C K N K L F P S Q C G A N R E F D E N -
ACATGCCAGTGTGTATGTAAGAACCTGCCCCAGAAATCAACCCCTAAATCCTGGAA 1080
TGTGTACGGTCACACATACATTTCTTGGACGGGCTCTTAGTTGGGATTTAGGACCTT
T C C Q C C V C K R T C P R N Q P L N P G K -
AATGTGCCTGTGAATGTACAGAAAGTCCACAGAAATGCTTTAAAGGAAAGATTCC 1140
TTACACGGACACTTACATGTCTTTCAGGTGTCTTTACGAACAATTTCCCTTCTTCAAGG
C A C E C T E S P Q K C L L K G K K F H -
ACCACCAACATGCAGCTGTTACAGACGGCCATGTACGAACCGCCAGAAAGGCTTGTGAGC 1200
TGGTGGTTTGTACGTCGACAAATGTCTGCCGGTACATGCTTGGCGGTCTTCCGAACACTCG
H Q T C S C Y R R P C T N R Q K A C E P -
CAGGATTTTCATATAGTGAAGAAGTGTGTGTCCTTCCCTTCATATTTGGCAAGACCAC 1260
GTCCCTAAAGTATACACTTCTTTCACACAGCAACACAGGGAAGTATAACCGTTTCTGGTG
G F S Y S E E V C R C V P S Y W Q R P Q -
AAATGAGCTAAGATTGTACTGTTTTCAGTTTCATCGATTTTCTATTATGGAAAACTGTGT

```

MATCH WITH FIG. 1E

FIG. 1D

MATCH WITH FIG. 1D

```

1261  -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      TTTACTCGATTCTTAACATGACAAAAAGGTCAAGTAGCTAAAAAGATAATAACCTTTTGACACA
      M S *
1321  TGGCACAGTAGAACTGCTGTGAACAGAGAGACCCTTGTGGTGCCATGCTAACAAAAAGACA
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      ACGGTGTCATCTTGACAGACACTTGCTCTCTGGAACACCCAGGTACGATTGTTTCTGT
1381  AAAGTCTGTCTTTCTGAAACCATGTGGATAACTTTACAGAAAAATGGACTGGAGCTCATCTG
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      TTTACAGACAGAAAGGACTTGGTACACCTATTGAAATGTCTTTACCTGACCTCGAGTAGAC
1441  CAAAAGGCCCTCTGTAAAGAETGGTTTCTGCCAATGACCAAAACAGCCCAAGATTTTCCTC
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      GTTTTCCGGAGAACATTTCTGACCAAAAGACGGTTACTGGTTTGTGCGGTTCTAAAAAGGAG
1501  TTGTGATTCTTTTAAAGAAATGACTATATAATTATTTCCCACTAAAAATATGTTTCTGTC
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      AACACTAAAGAAATTTTCTTACTGATATATAAAATAAAGGTGATTTTATAACAAAAAGACG
1561  ATTCATTTTATAGCAACAACAATTGGTAAAACTCACTGTGATCAATAATTTTATATCAT
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      TAAGTAAAAAATATCGTTGTTGTTAAACCATTTTGAGTGACACTAGTTATAAAAAATATAGTA
1621  GCAAAATATGTTTAAAAATAAAAATGAAAAATTGTATTTATAAAAAA
      -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      CGTTTTATACAAAATTTTATTTTACTTTTAAACATAAAATAATTTTTTTTTTTTTTTTT
1674

```

FIG. 1E

1 CGAGGCCACGGCTTATGCAAGCAAGATCTGGAGGAGCAGTTACGGTCTGTGTCCAGTGT
71 AGATGAACACTCATGACTGTACTCTACCCAGAATATTGGAAAAATGTACAAGTGTACGCTAAG
M T V L Y P E Y W K M Y K C Q L R
121 GAAAGGAGGCTGGCAACATAACAGAGAACAGGCCCAACCTCAACTCAAGGACAGAAGAGAC
K G G W Q H N R E Q A N L N S R T E E T
181 TATAAAATTTGCTGCAGCACATTATAATACAGAGATCTTGAAAAAGTATTGATAATGAGTG
I K F A A A H Y N T E I L K S I D N E W
241 GAGAAAGACTCAATGCATGCCACGGGAGGTGTGTATAGATGTGGGGAAGGAGTTGGAGT
R K T Q C M P R E V C I D V G K E F G V
301 CGCGACAAACACCTTCTTTAAACCTCCATGTGTGTCGCTACAGATGTGGGGGTTGCTG
A T N T F F K P P C V S V Y R C G G C C

FIG. 2A

361 CAATAGTGAGGGGCTGCAGTGCATGAACACCAGCAGCAGCTACCTCAGCAAGACGTTATT
N S E G L Q C M N T S T S Y L S K T L F
421 TGA AATACAGTGCCTCTCTCAAGGCCCAACAGTAACAATCAGTTTGCCCAATCA
E I T V P L S Q G P K P V T I S F A N H
481 CACTTCCTGCCGATGTCATGCTAAACTGGATGTTTACAGACAAGTTCCATTCCATTATTAG
T S C R C M S K L D V Y R Q V H S I I R
541 ACGTTCCTGCCAGCAACACTACACAGTGTCTCAGGCAGCGAACAAGACCTGCCCCCAACAA
R S L P A T L P Q C Q A A N K T C P T N
601 TTACATGTGGAATAATCACATCTGCAGATGCCTGGCTCAGGAAGATTTTATGTTTTCCTC
Y M W N N H I C R C L A Q E D F M F S S
661 GGATGCTGGAGATGACTCAACAGATGGATTCCCATGACATCTGTGGACCAACAAGGAGCT
D A G D D S T D G F H D I C G P N K E L

FIG. 2B

```

721  GGATGAAGAGACCTGTCAGTGTGTCTGCAGACGGGGGCTTCGGCCCTGCCAGCTGTGGACC
      -----+-----+-----+-----+-----+-----+-----+
      D E E T C Q C V C R A G L R P A S C G P

781  CCACAAAGAACTAGACAGAAACTCATGCCAGTGTGTCTGTATAAAACAACACTCTTCCCAG
      -----+-----+-----+-----+-----+-----+-----+
      H K E L D R N S C Q C V C K N K L F P S

841  CCAATGTGGGGCCCAACCGAGAAATTGATGAAAAACACATGCCAGTGTGTATGTAAAGAAC
      -----+-----+-----+-----+-----+-----+-----+
      Q C G A N R E F D E N T C Q C V C K R T

901  CTGCCCCAGAAATCAACCCCTAAATCCTGGAAATGTGCCCTGTGAATGTACAGAAAGTCC
      -----+-----+-----+-----+-----+-----+-----+
      C P R N Q P L N P G K C A C E C T E S P

961  ACAGAAATGCTTGTATAAAGGAAAGAAGTTCCACCACCAACATGCAGCTGTTACAGAGC
      -----+-----+-----+-----+-----+-----+-----+
      Q K C L L K G K K F H H Q T C S C Y R R

1021 GCCATGTACGAACCGCCAGAAGGCTTGTGAGCCAGGATTTTCATATAGTGAAGAAGTGTG
      -----+-----+-----+-----+-----+-----+-----+
      P C T N R Q K A C E P G F S Y S E E V C

```

FIG. 2C

1081 TCGTTGTGTCCTTCATATTGGCAAAGACCACAAATGAGCTAAGATTGTACTGTTTCCA
R C V P S Y W Q R P Q M S
1141 GTTCATCGATTTTCTATTATGGAAAACCTGTGTGGCCACAGTAGAACTGTCTGTGAACAGA
1201 GAGACCCCTTGTGGGTCCATGCTAACAAAGACAAAAGTCTGTCTTTCCCTGAACCATGTGGA
1261 TAACTTTACAGAAATGGACTGGAGCTCATCTGCAAAAGGCCCTCTTGTAAGACTGGTTTT
1321 CTGCCAATGACCAAACAGCCCAAGATTTTCCTCTTGTGATTTCTTTAAAAGAATGACTATA
1381 TAATTTATTTCCTACTAAAAATATTGTTTCTGCAATTCATTTTATAGCAACAACAATTGGT
1441 AAACTCACTGTGATCAATATTTTATATCATGCAAAAATATGTTTAAAATAAAAATGAAAA
1501 TTGTATTATAAAAAATAAAAAA
-----+-----

FIG. 2D

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1 50
 Pd g f a . MRTLACLLL LGGCYLAHVL AEEAEIPREV IERLARSIQH SIRD LORLLE
 Pd g f b MNRCAW LFL SLCCYLR LVS AEGDPIPEEL YEMLSOHSIR SFDDLORLLH
 Veg f MNFL L SWHWSLALL LY LHHAKWSQA
 Veg f 2 MTV LYPEYKMYK CQ LKGGWQH N

51 100
 Pd g f a IDSVGSEDSL OTSLRAHGVH ATKHVPEKRP LP IRRKRSL EEAVP
 Pd g f b GDP GEEDGA ELDLNMTRSH SGGELES LARGRRSLG SLTIAEPAMI
 Veg f APM AE GCGQ NHHEVVKFMD VYQR
 Veg f 2 REQANLNSRT EETIKFAAH YNTEILKSID NEWRK

101 150
 Pd g f a AVCKTRTVIY EIPRSQVDPT SANFLIWPPC VEVKRC TGCC NTSSVKQPS
 Pd g f b AECKTRTEVF EISRR L IDRT NANFLWPPC VEVQRC SGCC NNRNVQRPPT
 Veg f SYCHPIETLV DIFQ EYPDEI . . EYIFKPS VPLMRCGGCC NDEGLECVPT
 Veg f 2 TQCMPREVCI DVGKEFGVAT . . NTFFKPPC VSVYRCGGCC NSEGLQGMNT

151 200
 Pd g f a RVHHRSVKVA KVEYVRKKPK LKEVQVRLEE HLEQAC AT
 Pd g f b QVQLRPVQVR KIEIVRK KPI FK KATVILED HLAKC ETVAARPVT
 Veg f EESNITWQIM RIK . PH . QG QHIGEMSFLO HNKCEPRPK DRARQEKKS V
 Veg f 2 STSYLSKTLF EIT . VPLSQG PKPVTISFAN HTSQRQMSKL D VYRQVHSII

FIG. 3A

201					250
Pdgfa	.....TSLNP	YREEDIDVR	.....	.....
Pdgfb	RSPGCSQEQ	AKTPQIRVTI	RTVRVRRPPK	GKHKFKHTH	DKTALKETLG
Vegf	RGK.....	CKGQKRKRK	KSRYKSWSV	VGARCLMPW	SLPGPHP
Vegf2	RRSLPATLPQ	QQAANKTCPT	NYMNNHICR	CLAQEDMFS	SDAGDDSDG
251					300
Pdgfa	.....	.....	.....	.....
Pdgfb	A.....	.....	.....	.....
Vegf	.....CGP.....	.....	CSE	RRKHLFVQDP	QICKCSCKNT
Vegf2	FHDICGPNKE	LDEETCCVC	RAGLRPASC	G PHKEL...DR	NSCCVCCKNK
301					350
Pdgfa	.....	.....	.....	.....
Pdgfb	.....	.....	.....	.....
Vegf	.....DSRCKARQ	LELNERTCRC	DKPRR.....	.....
Vegf2	LFPSQCGANR	EFDENTCQC	VCKRTCPRNQ	PLNPGKCACE	CTESPQKCLL
351					398
Pdgfa	.....	.....	.....	.....
Pdgfb	.....	.....	.....	.....
Vegf	.....	.....	.....	.....
Vegf2	KGKFFHHQTC	SCYRRPCTNR	QKACEPGFSY	SEEVCRCPVS	YWQRPQMS

FIG. 3B

PERCENTAGE (%) OF AMINO ACID IDENTITIES BETWEEN EACH PAIR OF GENES IS SHOWN IN THE FOLLOWING TABLE				
	PDGF α	PDGF β	VEGF	VEGF2
PDGF α				
PDGF β	48.0			
VEGF	20.7	22.7		
VEGF2	23.5	22.4	30.0	

FIG.4

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Expression of VEGF2 mRNA in
Human Breast Tumor Cells

1 2 3 4 5 6 7 8 9



◀ 28 S

◀ 18 S

Lane 1. normal breast tissue
Lane 2. breast tumor tissue
Lane 3-9. breast tumor cell lines.

FIG.5

205210-92/5E660

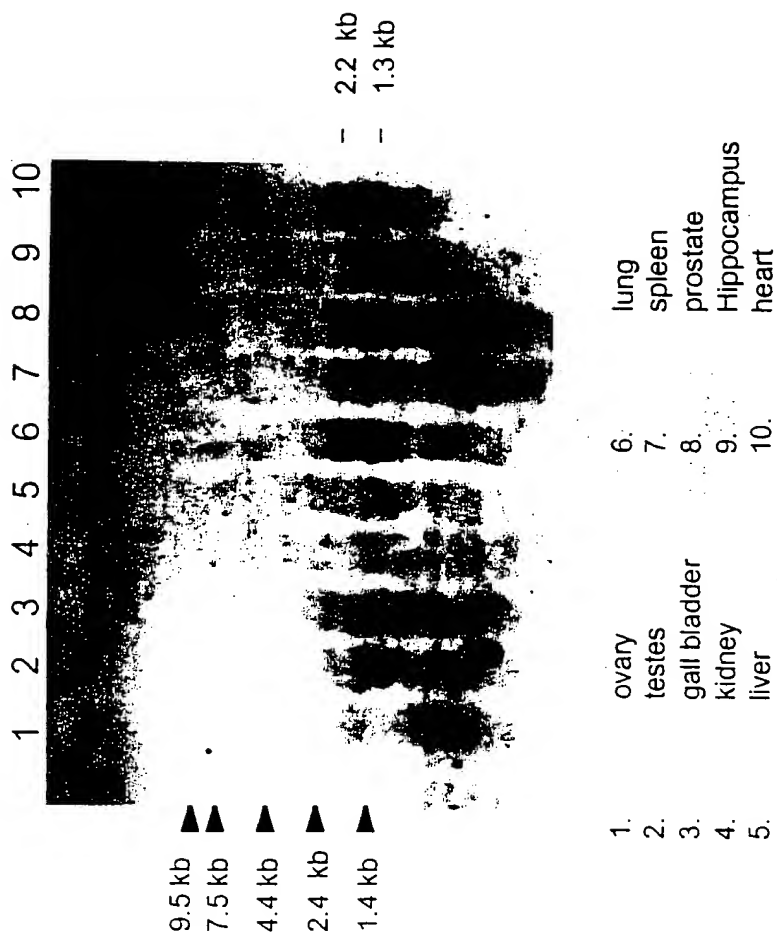
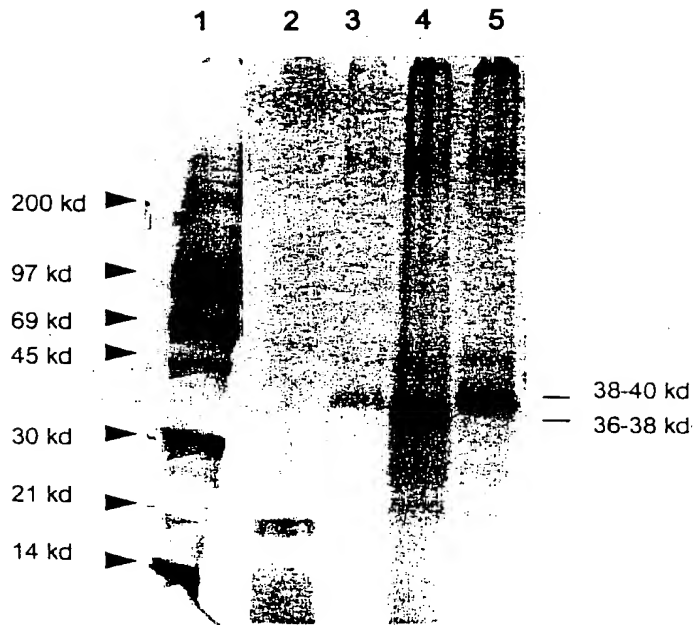


FIG.6

Expression of VEGF2 mRNA in human adult tissues.



Lane 1: 14-C and rainbow M.W. marker
 Lane 2: FGF control
 Lane 3: VEGF2 (M13-reverse & forward primers)
 Lane 4: VEGF2 (M13-reverse & VEGF-F4 primers)
 Lane 5: VEGF2 (M13-reverse & VEGF-F5 primers)

FIG.7

non-reducing gel

M 1 M 2 M

98 —

67 —

45 —

30 —

21 —

14 —

Lane M

Marker

Lane 1 vector medium

Lane 2 VEGF2 medium

FIG.8A

reducing gel

M 1 2 M 3 4 M

210 —

98 —

67 —

45 —

30 —

21 —

14 —

Lane M:

Marker

Lane 1: vector Cytoplasm

Lane 2: vector medium

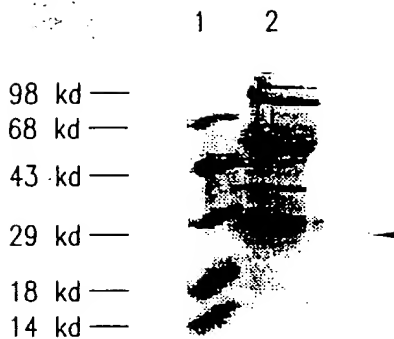
Lane 3: VEGF2 Cytoplasm

Lane 4: VEGF2 medium

FIG.8B

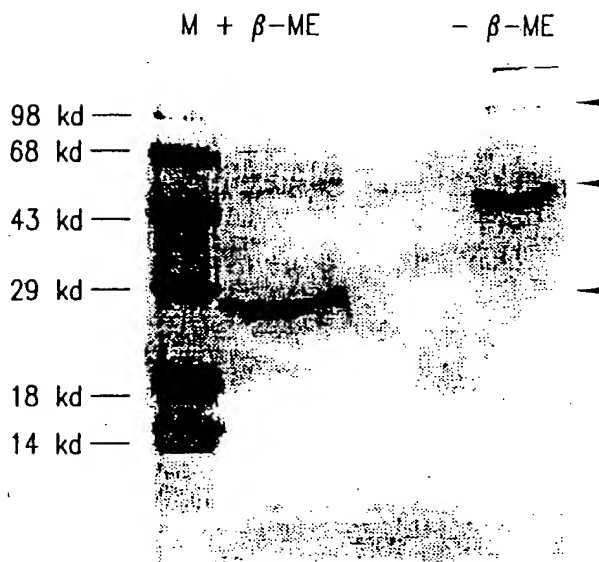
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FIG.9



Lane 1: Molecular weight marker
Lane 2: Precipitates containing VEGF2.

FIG.10



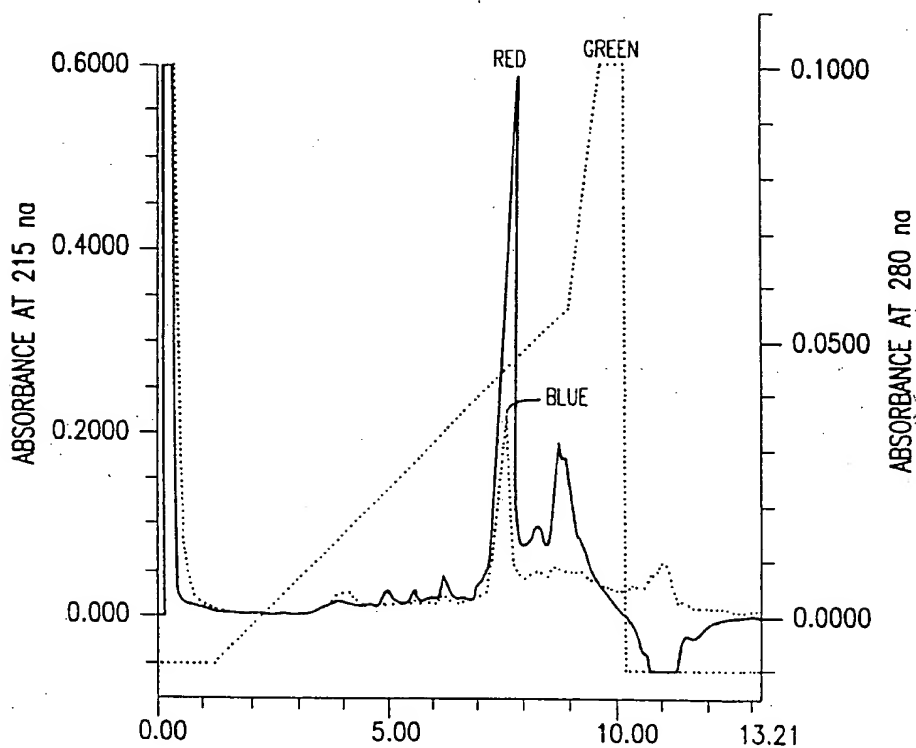


FIG. 11

FIG.12

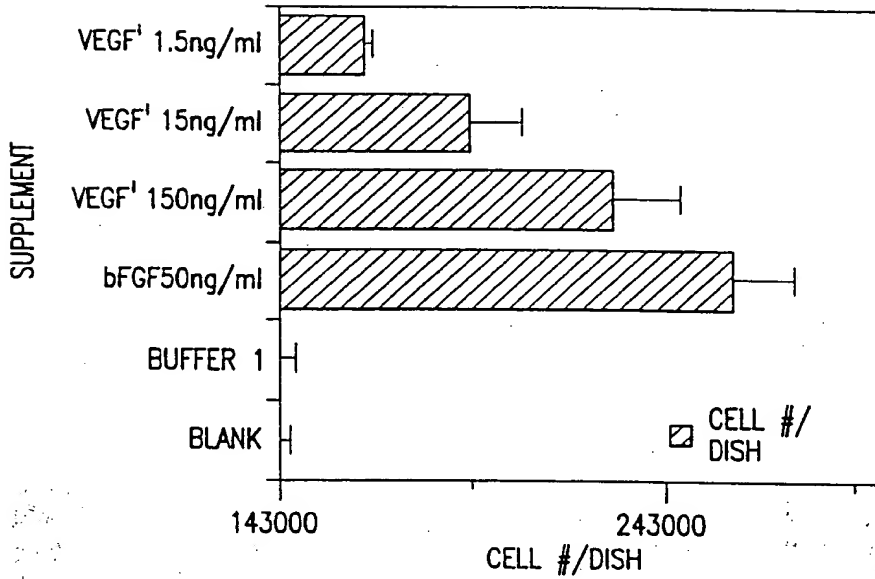


FIG.13

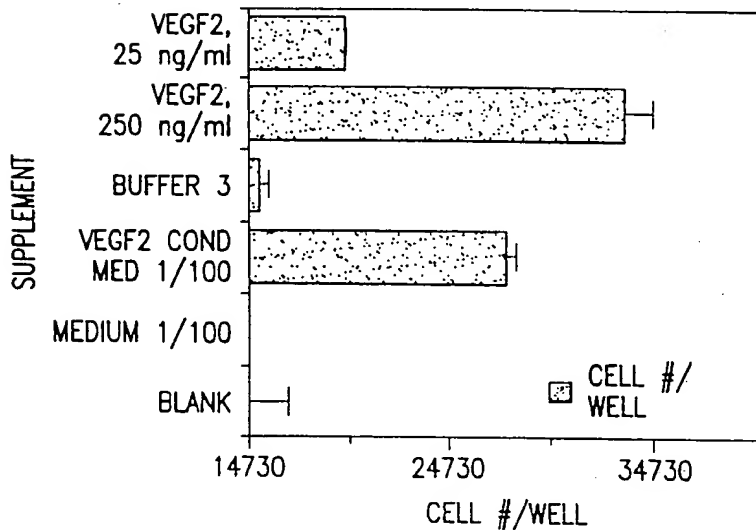


FIG.14A

fetal kidney
fetal lung
fetal liver
brain
kidney
lung
liver
spleen
thymus
bone marrow
testes
placenta
skeletal muscle

1 2 3 4 5 6 7 8 9 10 11 12 13

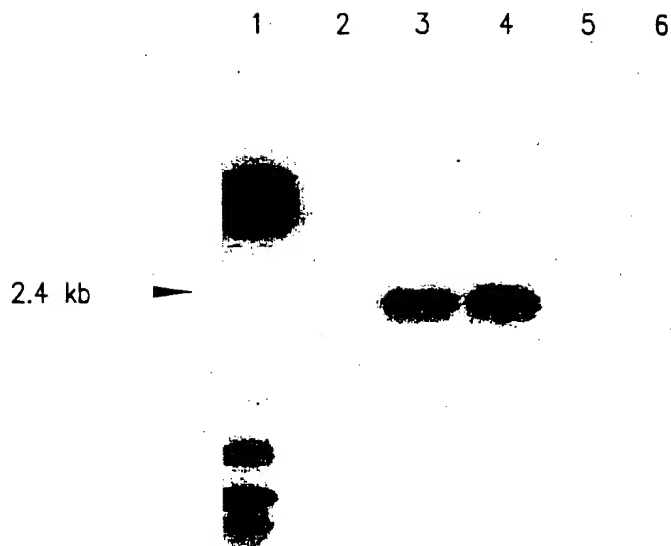


FIG.14B

M B 1 2 3 4 5 6 7 8 9 10 11 12 13



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1. Molecular Weight Marker
2. umbelical vein endothelial cells
3. aortic smooth muscle cells
4. Dermal fibroblast

FIG.15

FIG.16A

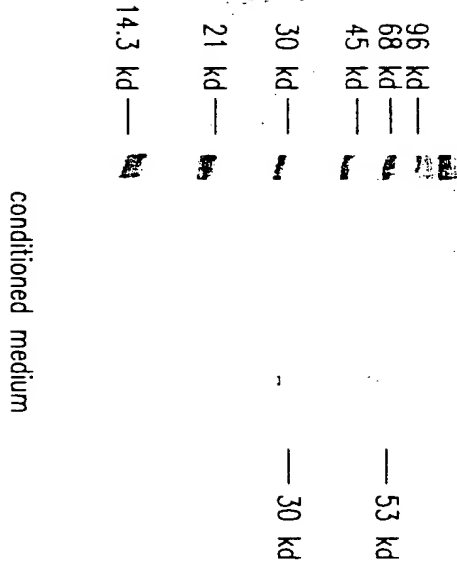
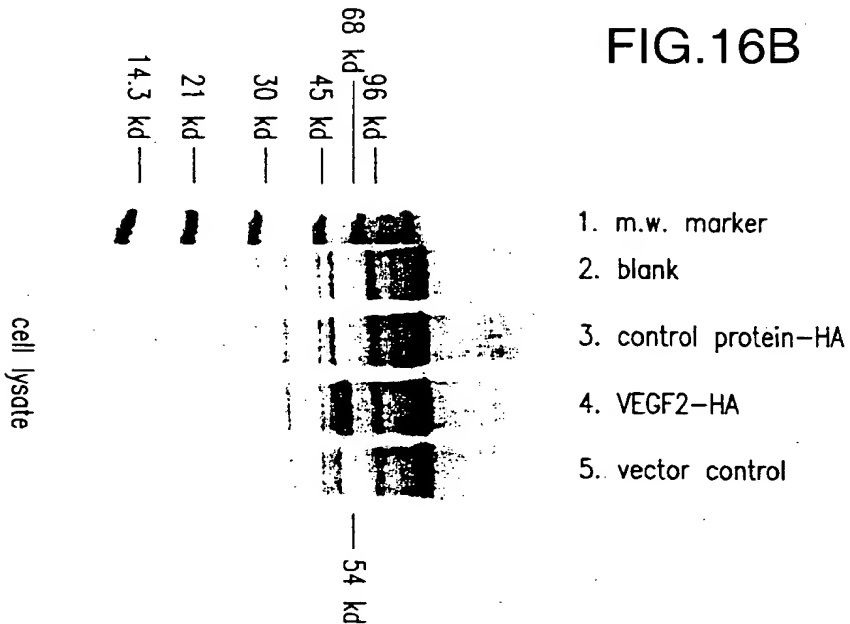


FIG.16B



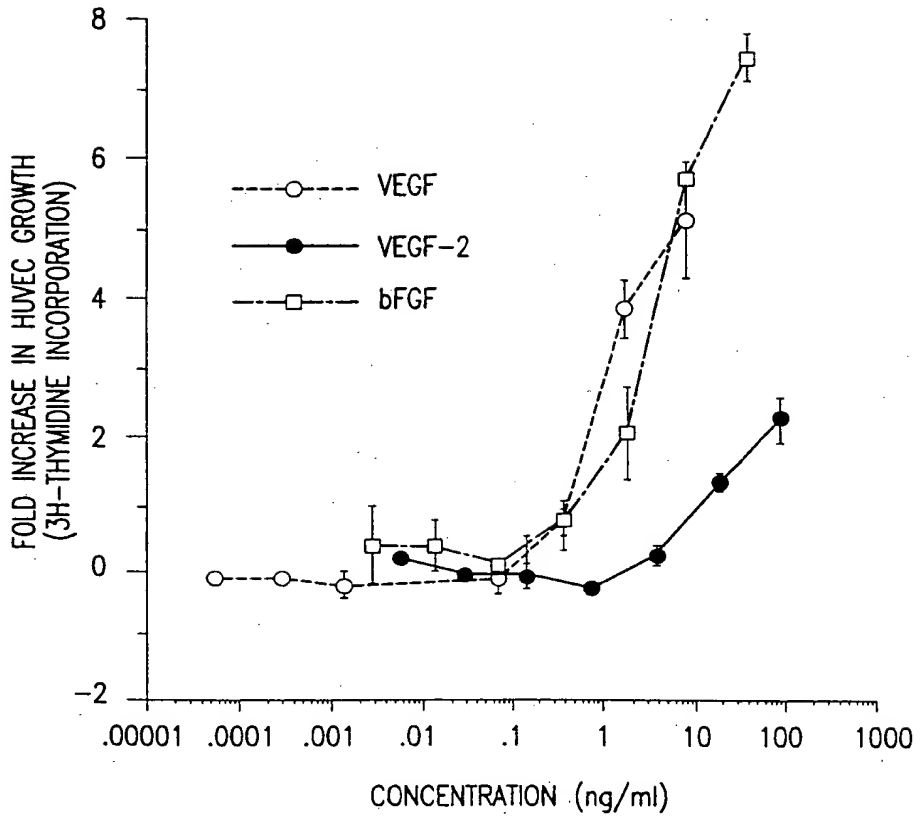


FIG.17

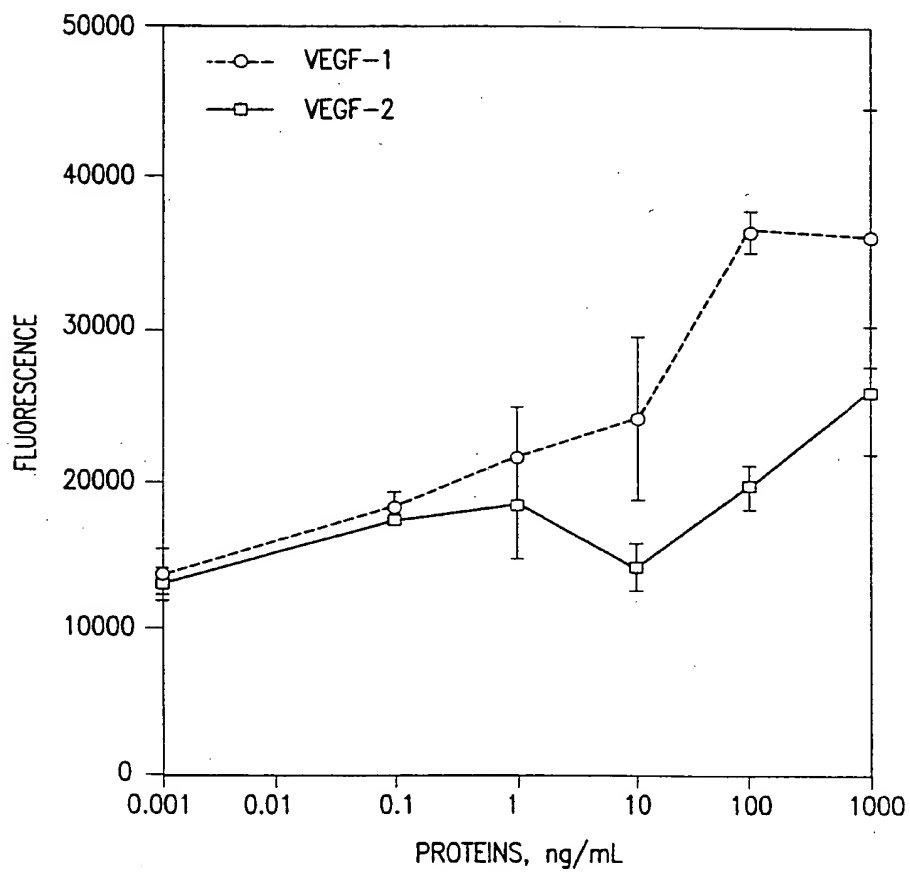


FIG.18

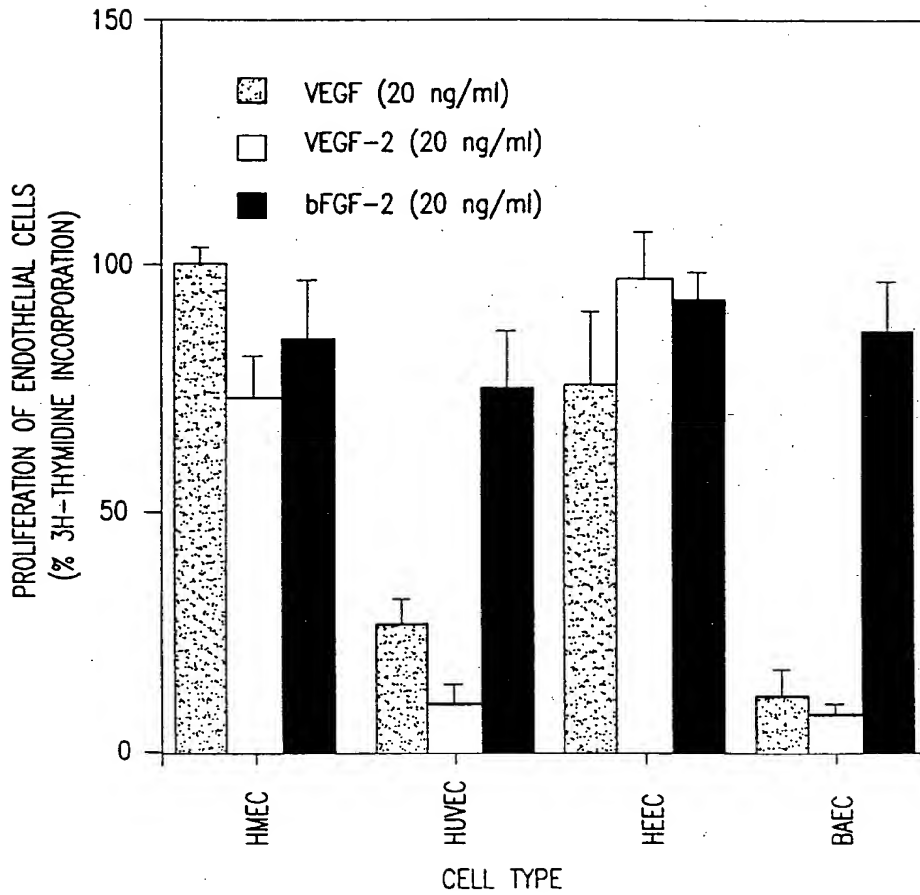


FIG.19

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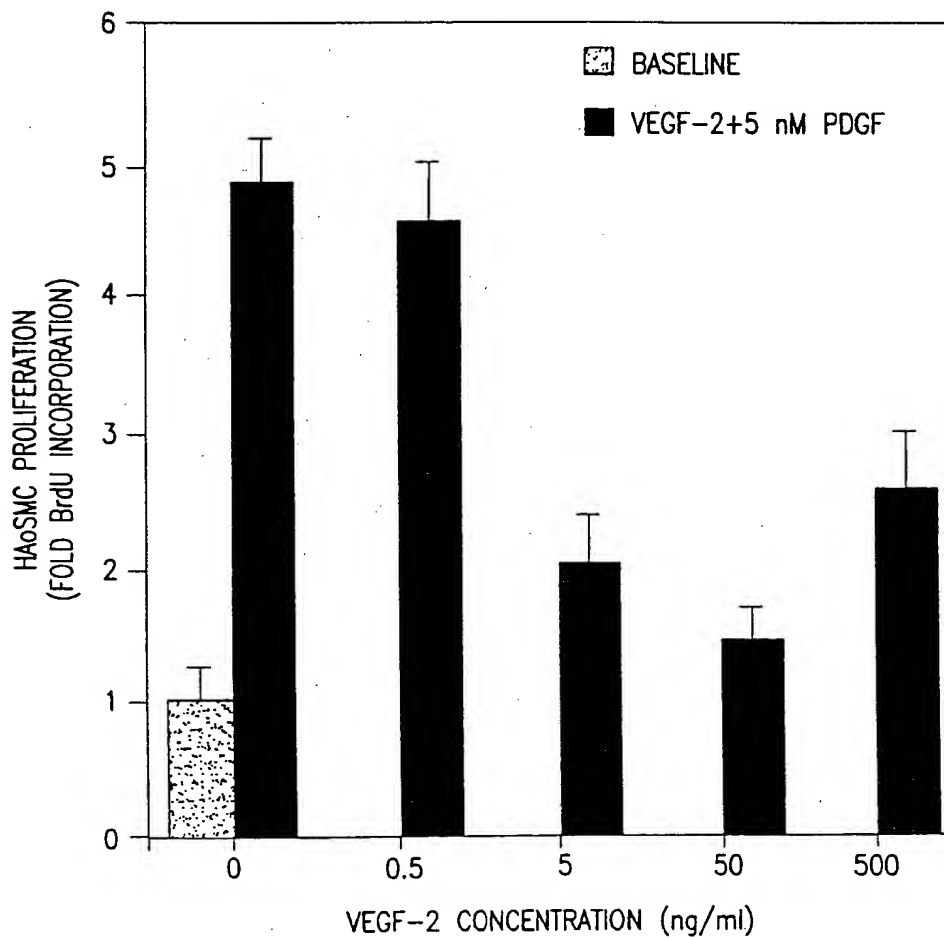


FIG.20A

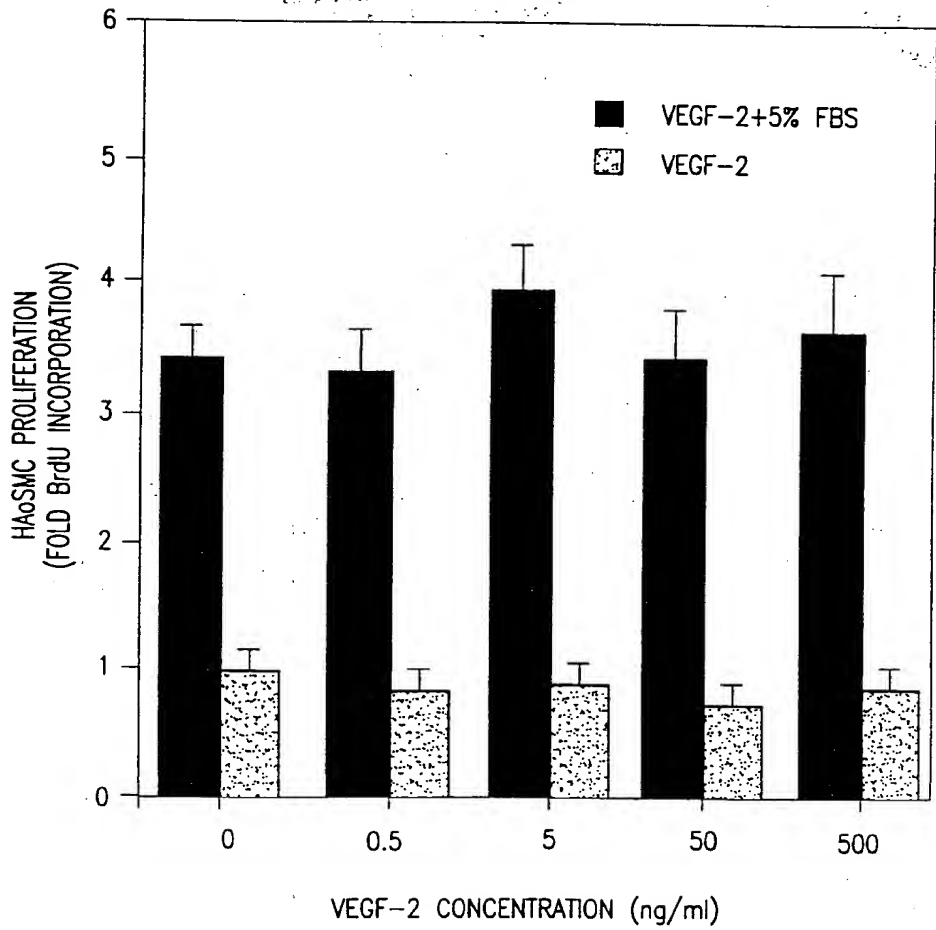


FIG.20B

FIG.21A

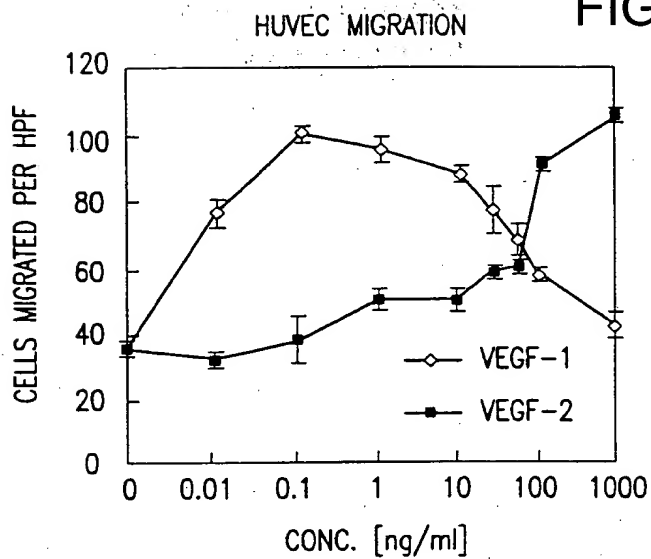
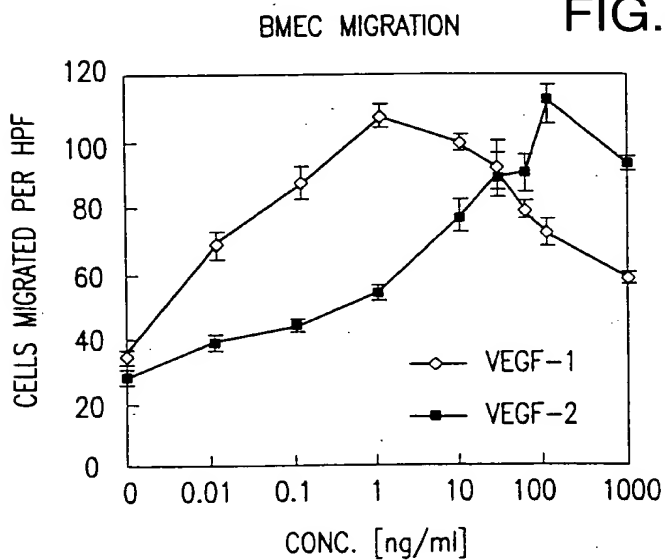


FIG.21B



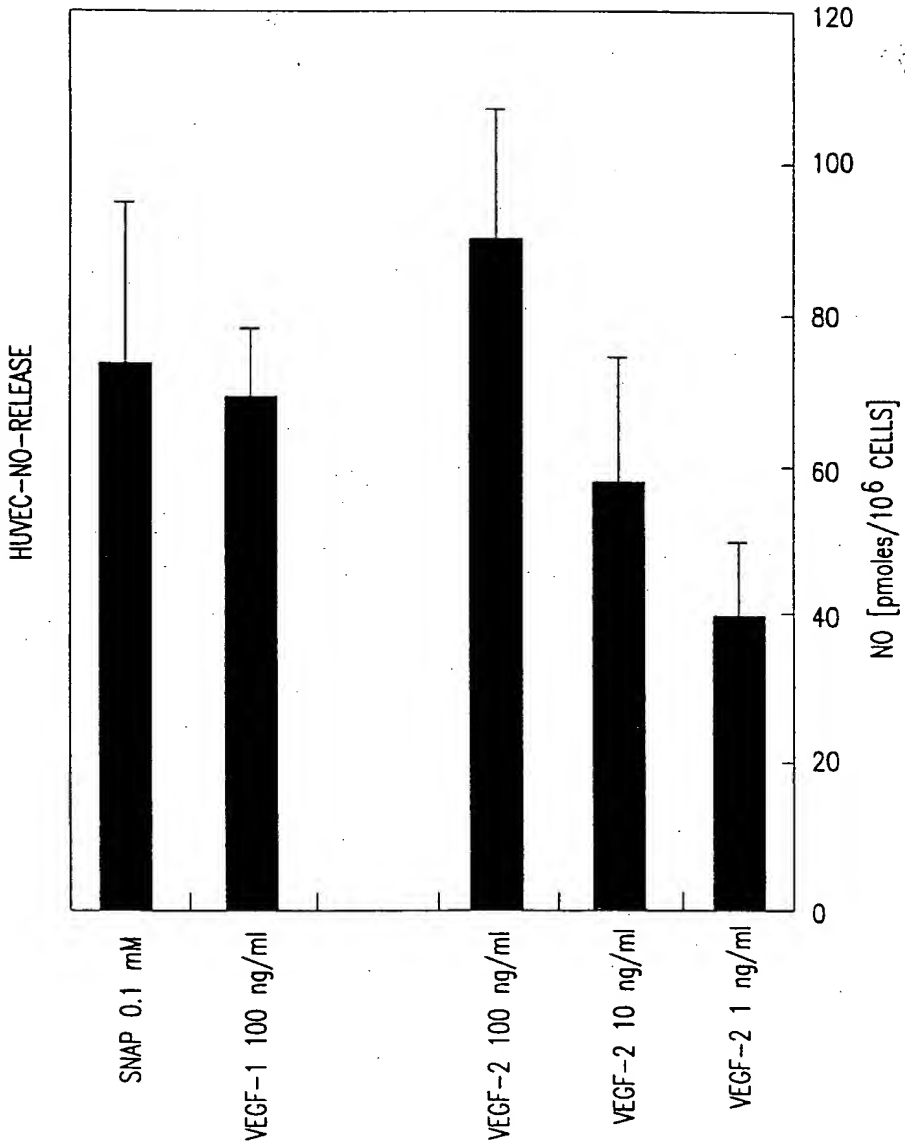


FIG.22

FIG.23

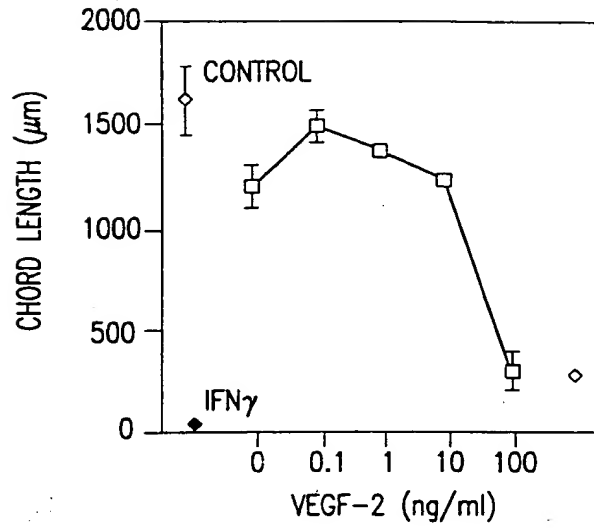


FIG.24

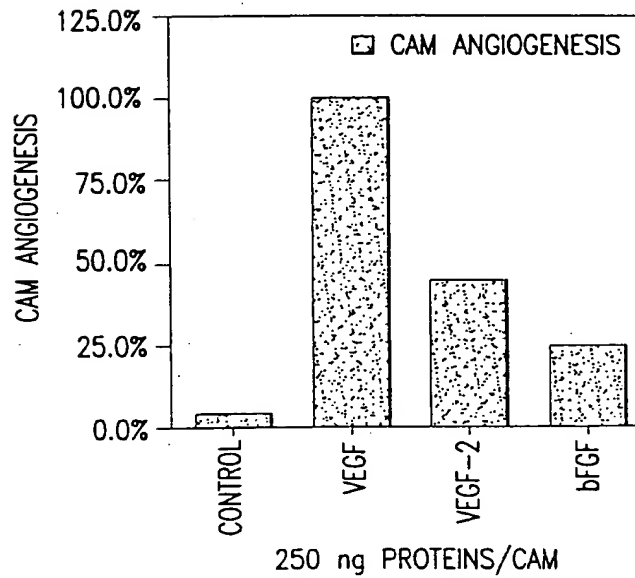


FIG.25A

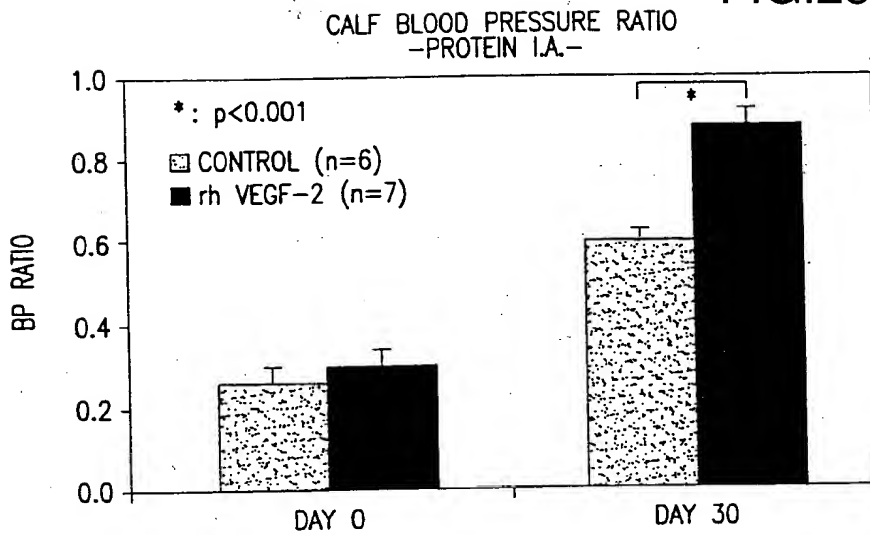
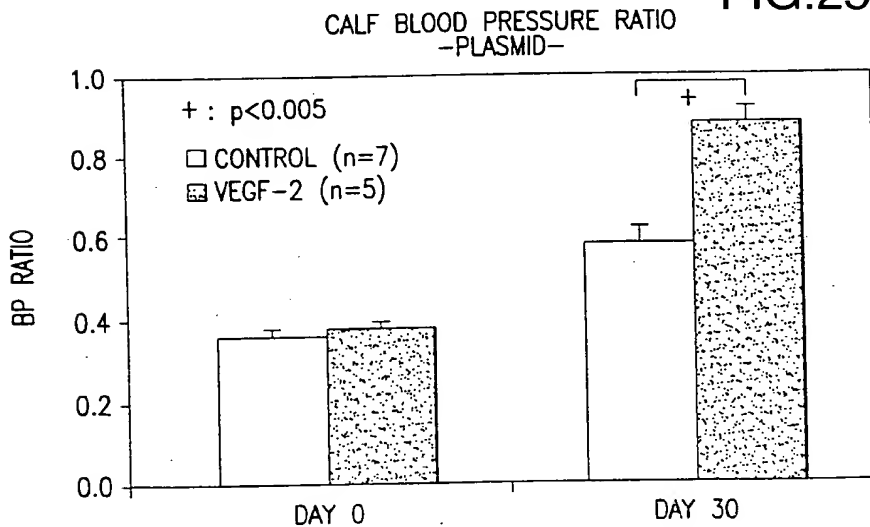


FIG.25B



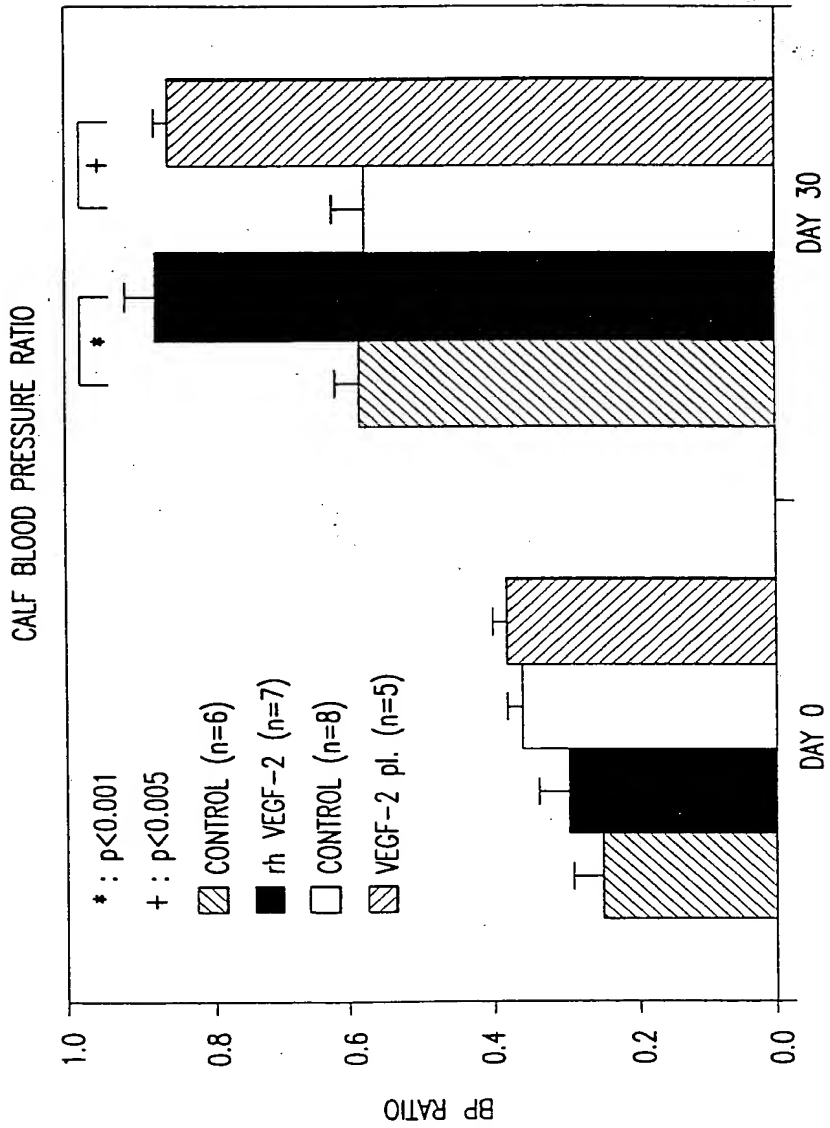
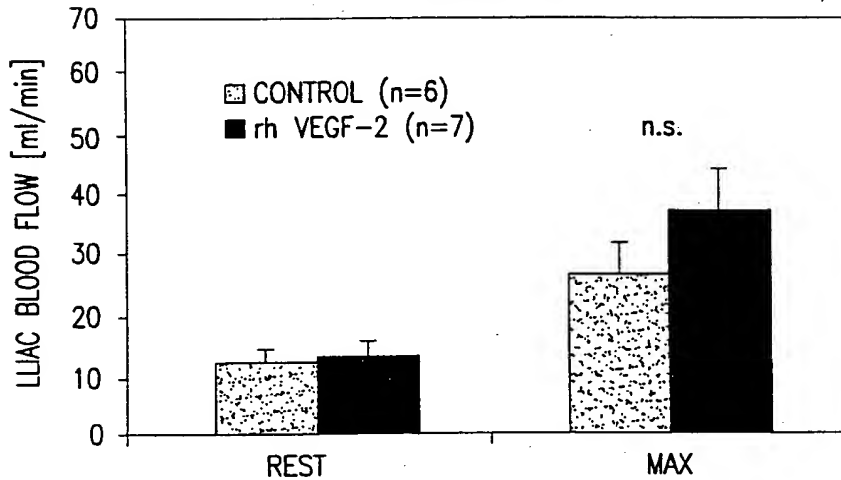


FIG.25C

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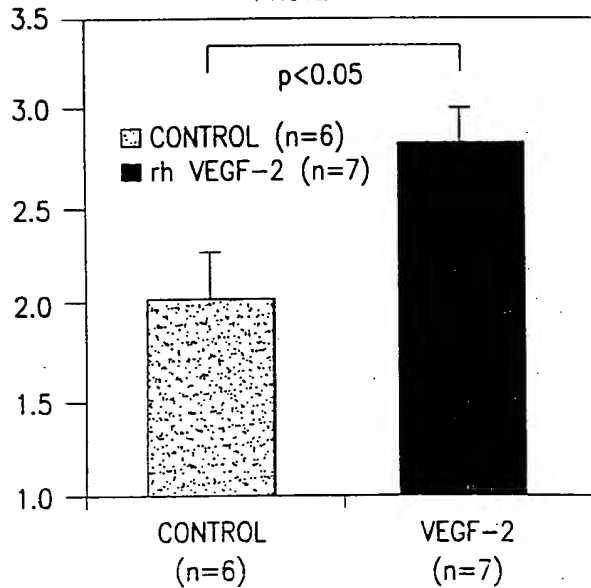
LLIAC BLOOD FLOW
-PROTEIN I.A.-

FIG.25D



LLIAC FLOW RESERVE
-PROTEIN I.A.-

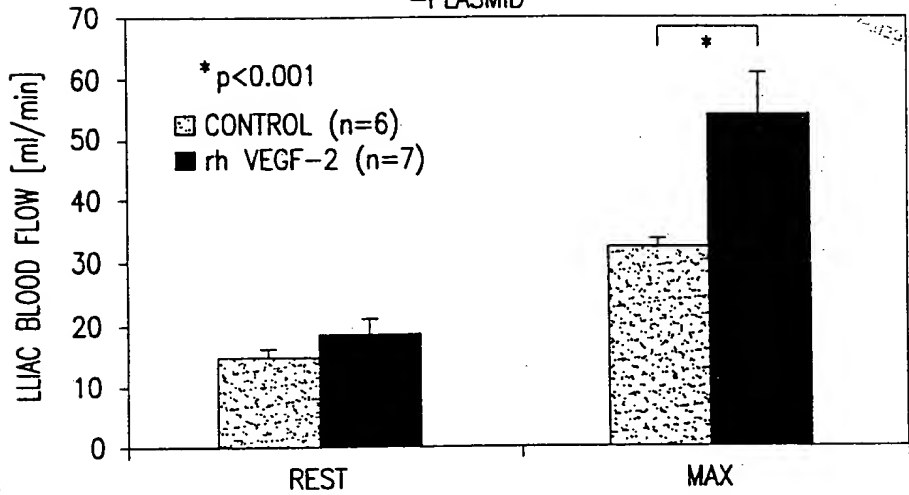
FIG.25E



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LLIAC BLOOD FLOW
-PLASMID-

FIG.25F



LLIAC FLOW RESERVE
-PLASMID-

FIG.25G

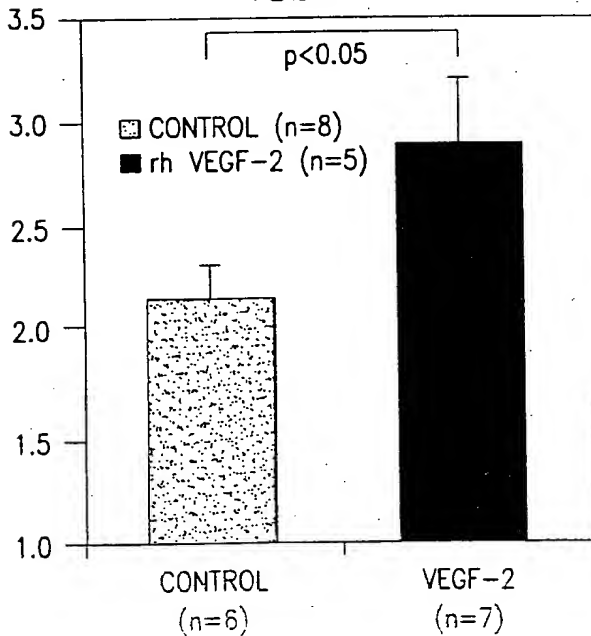


FIG.25H

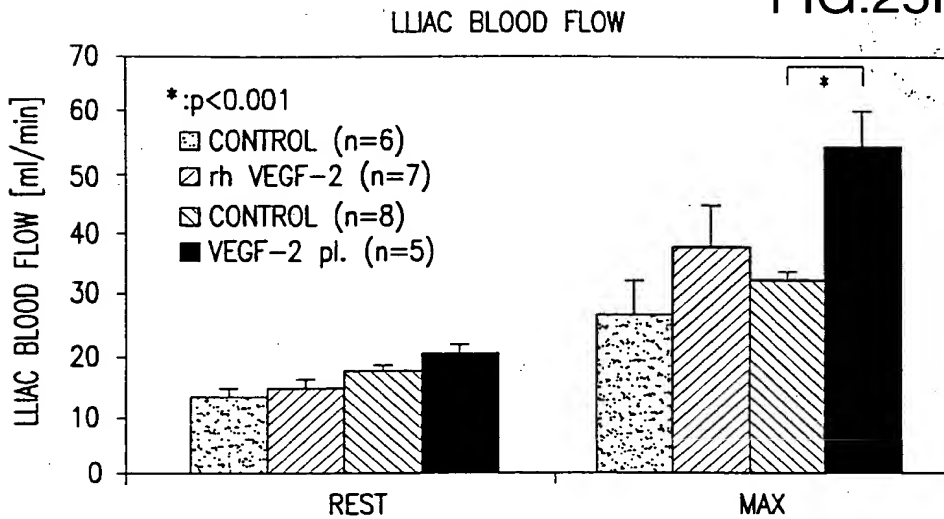
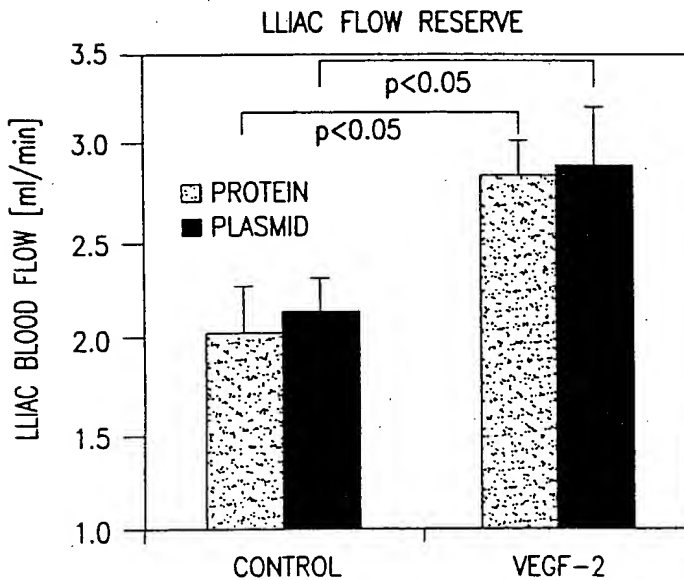


FIG.25I



ANGIOGRAPHIC SCORE
-PROTEIN I.A.-

FIG.25J

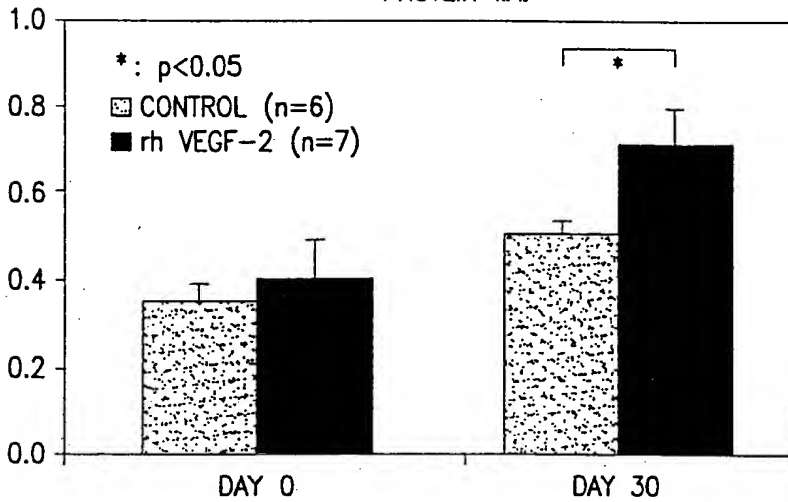
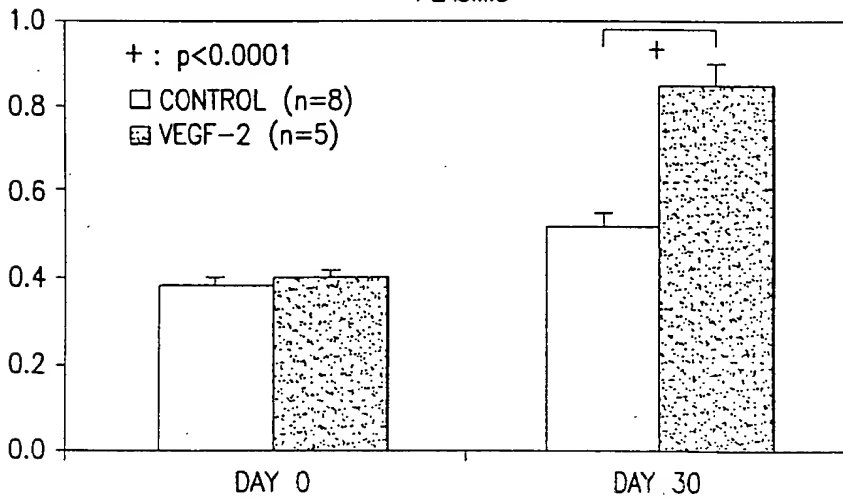
ANGIOGRAPHIC SCORE
-PLASMID-

FIG.25K



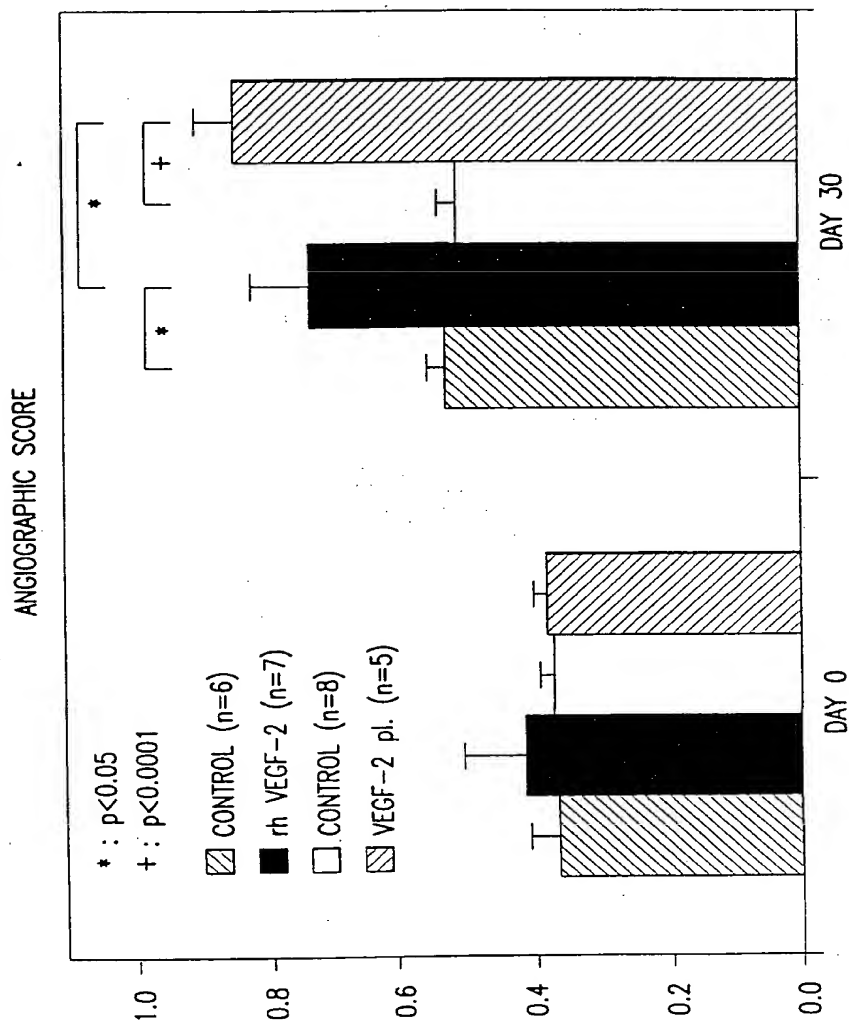


FIG.25L

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FIG.25M

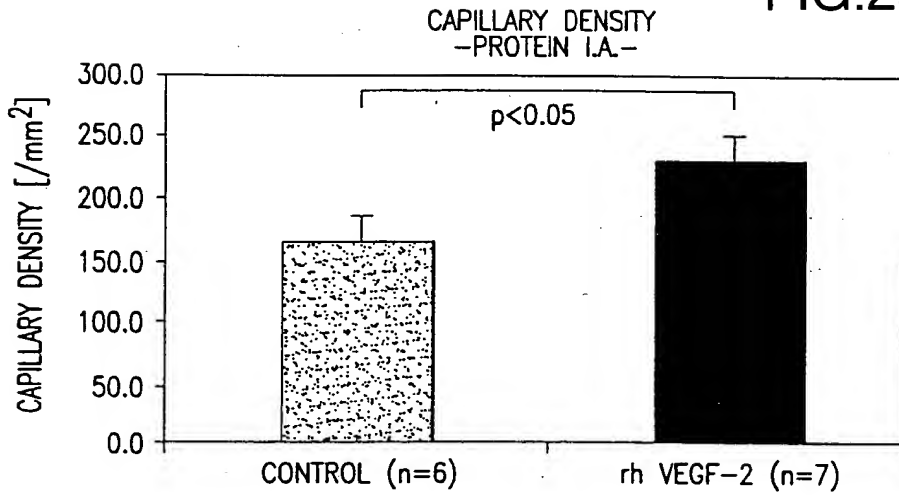
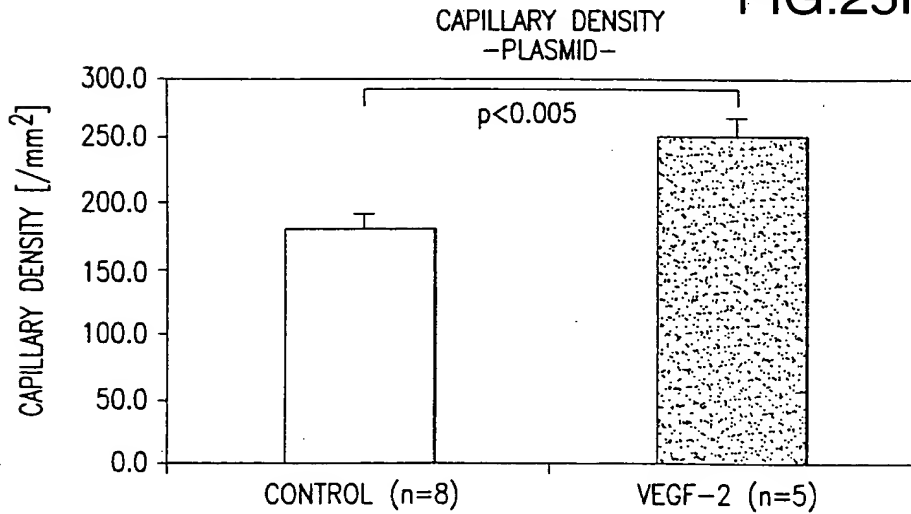
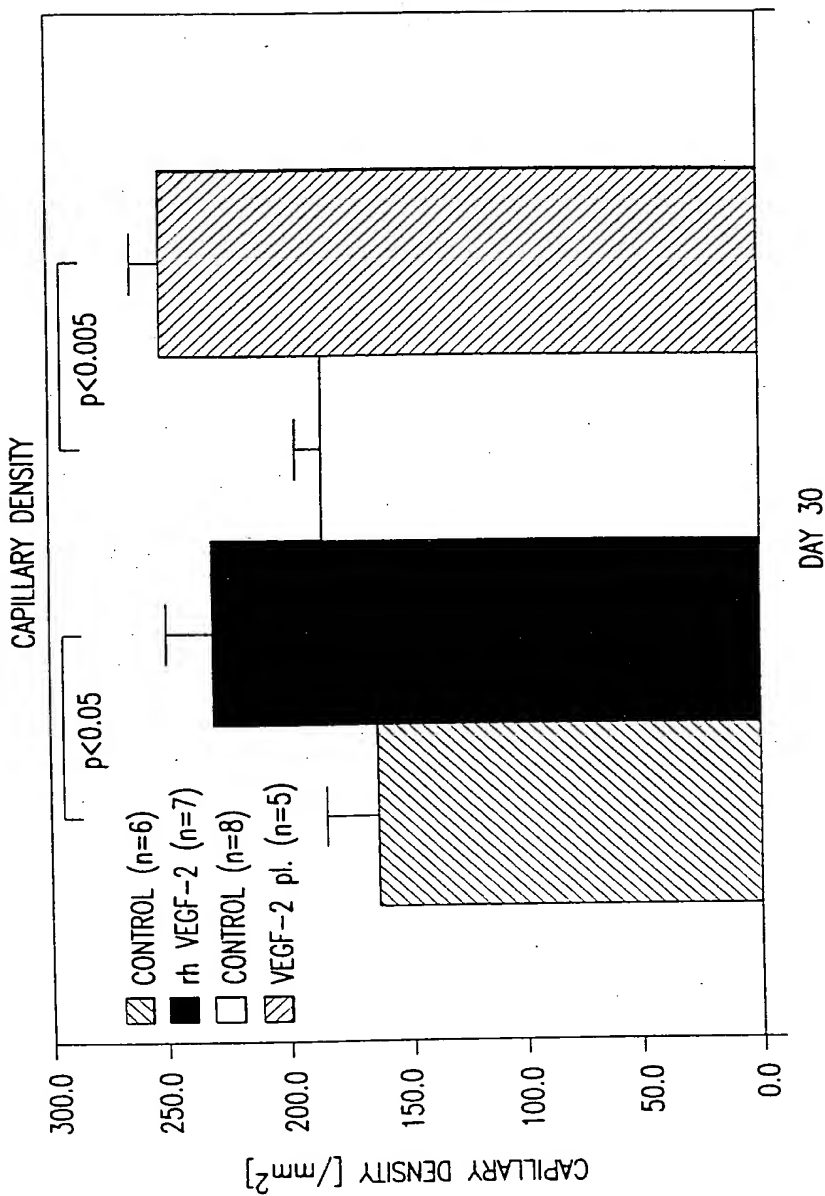
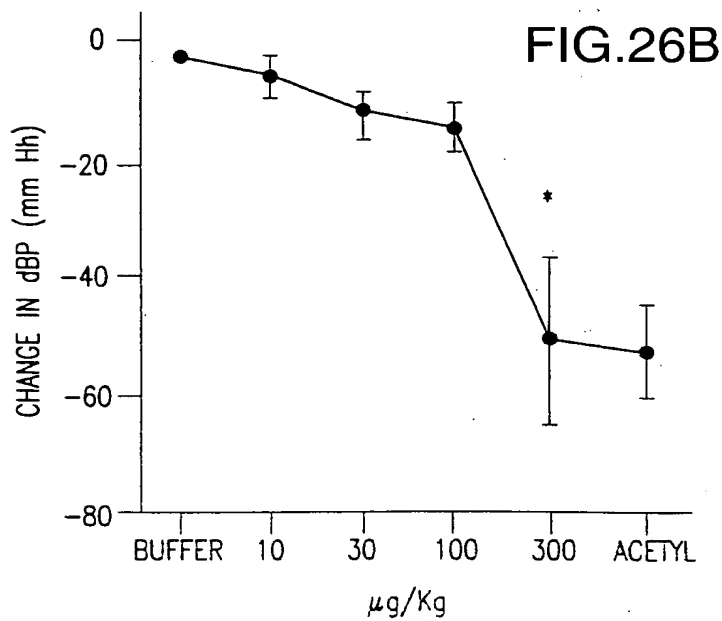
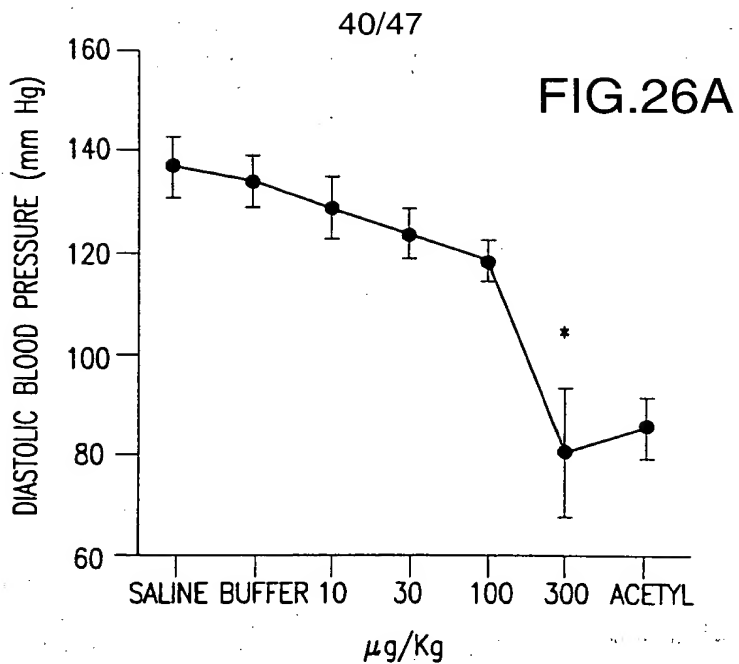


FIG.25N





0952604500
205210:92452660



205210-922560

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FIG.26C

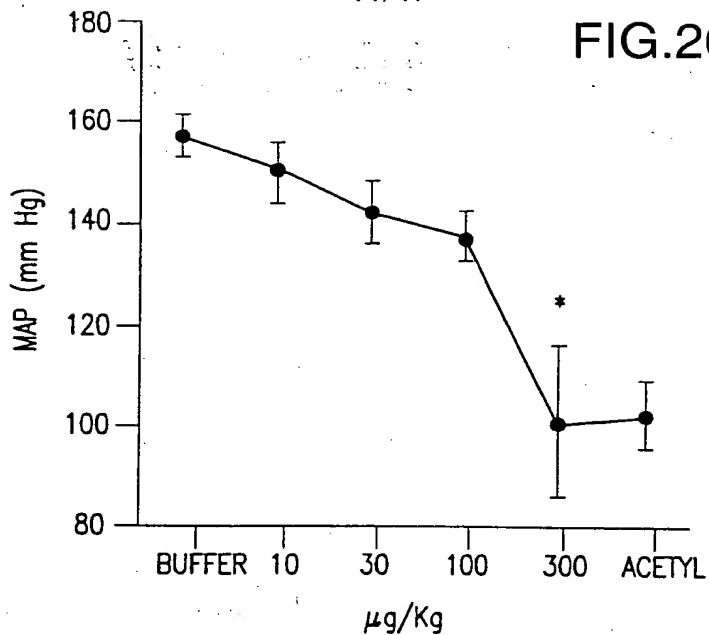
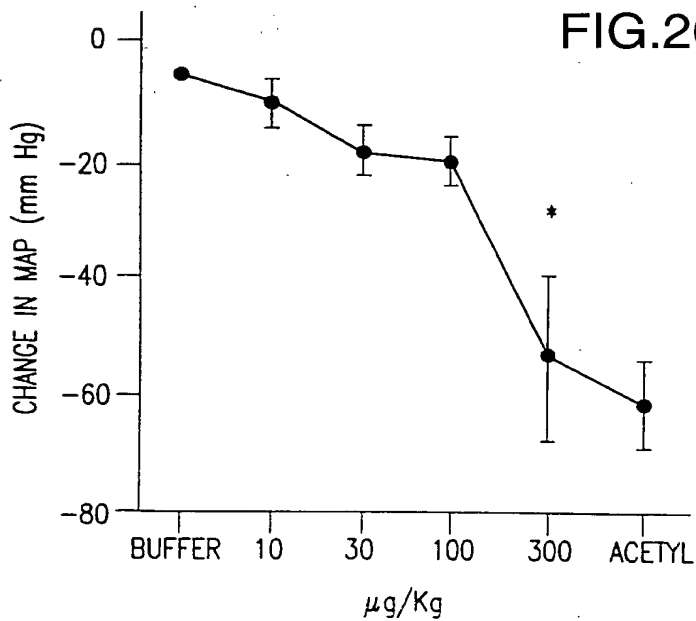


FIG.26D



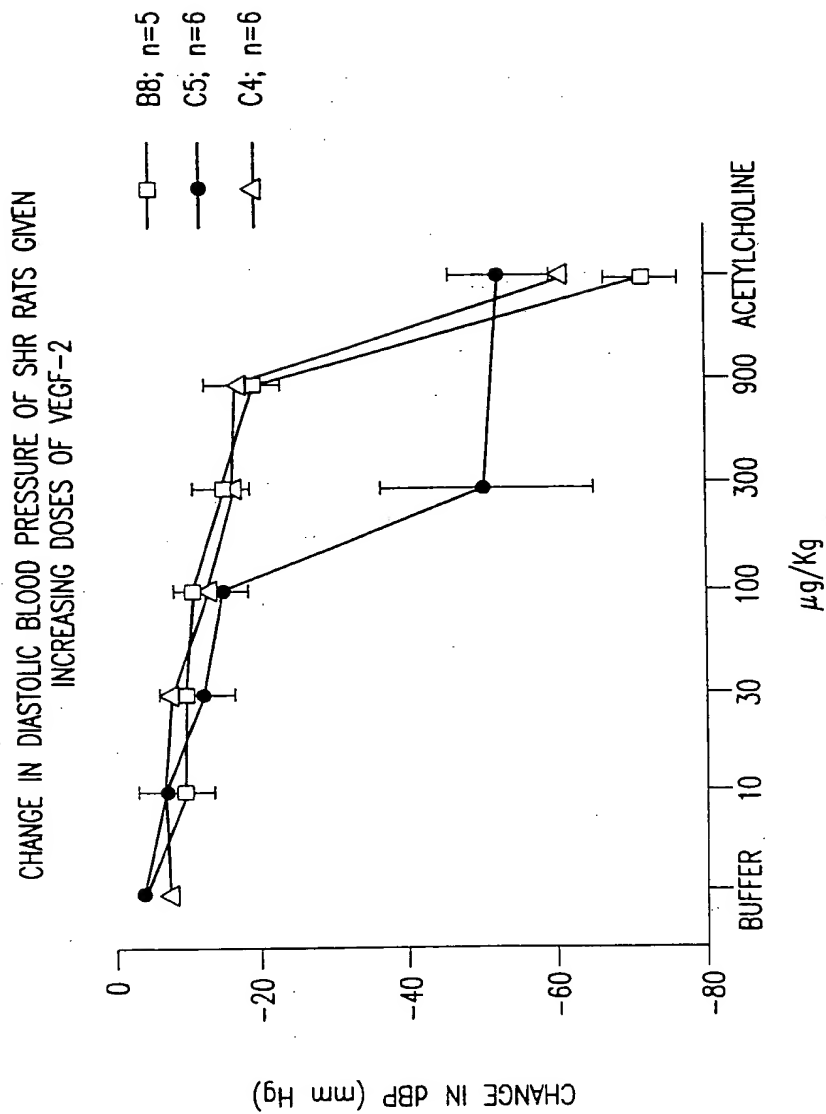


FIG.26E

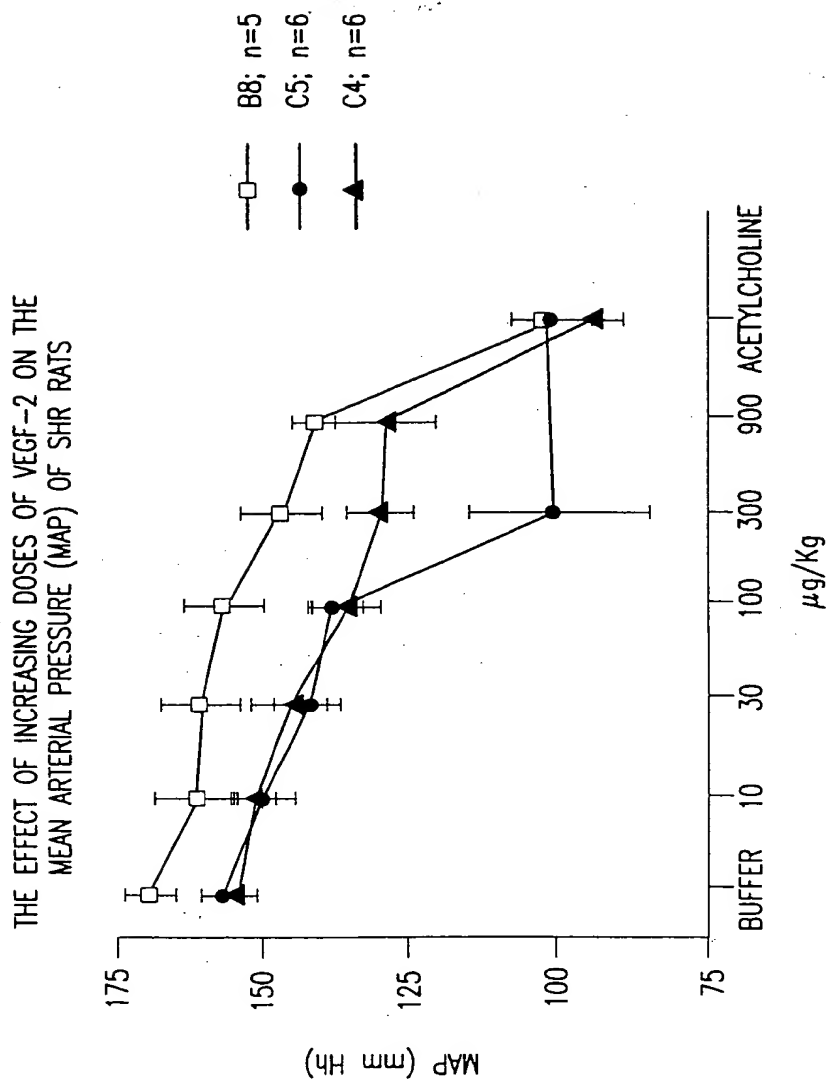


FIG.26F

THE EFFECT OF VEGF-2 ON THE DIASTOLIC BLOOD PRESSURE OF SHR RATS

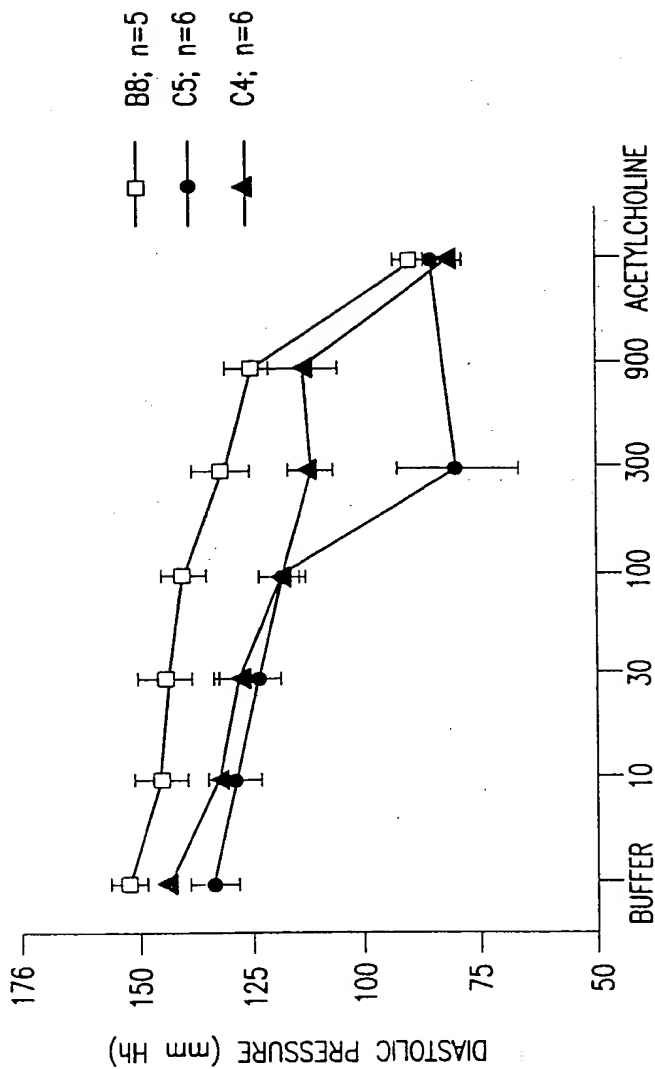


FIG.26G

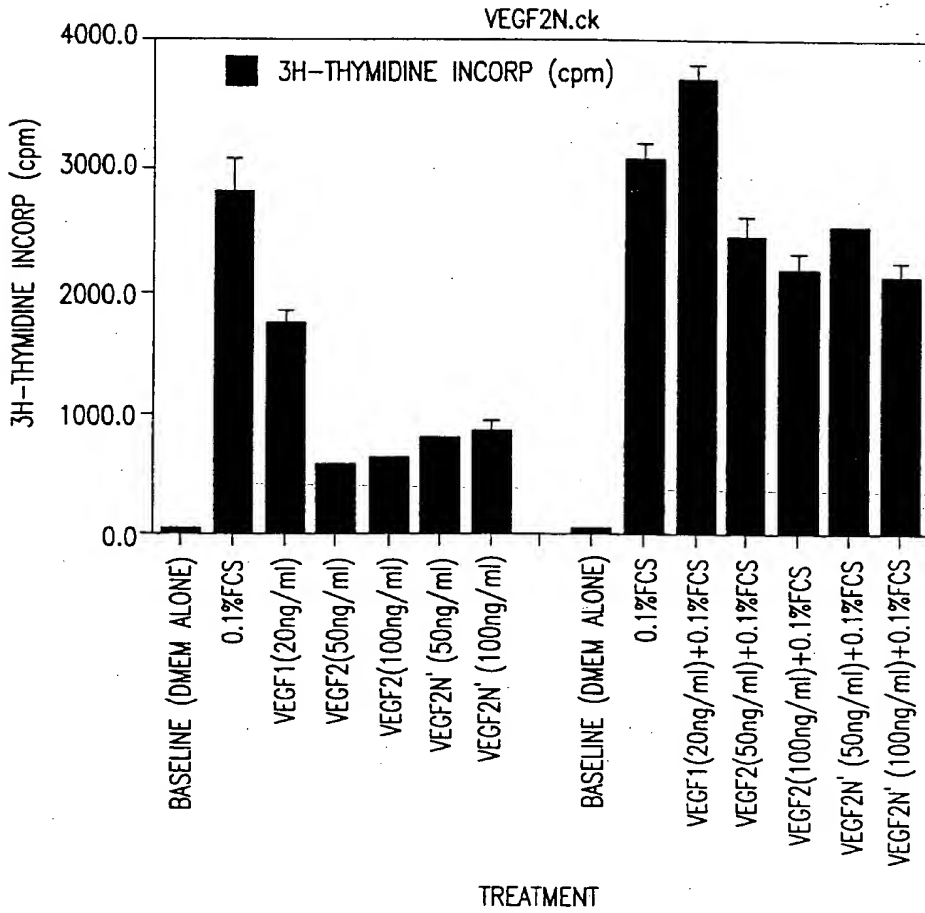


FIG.27

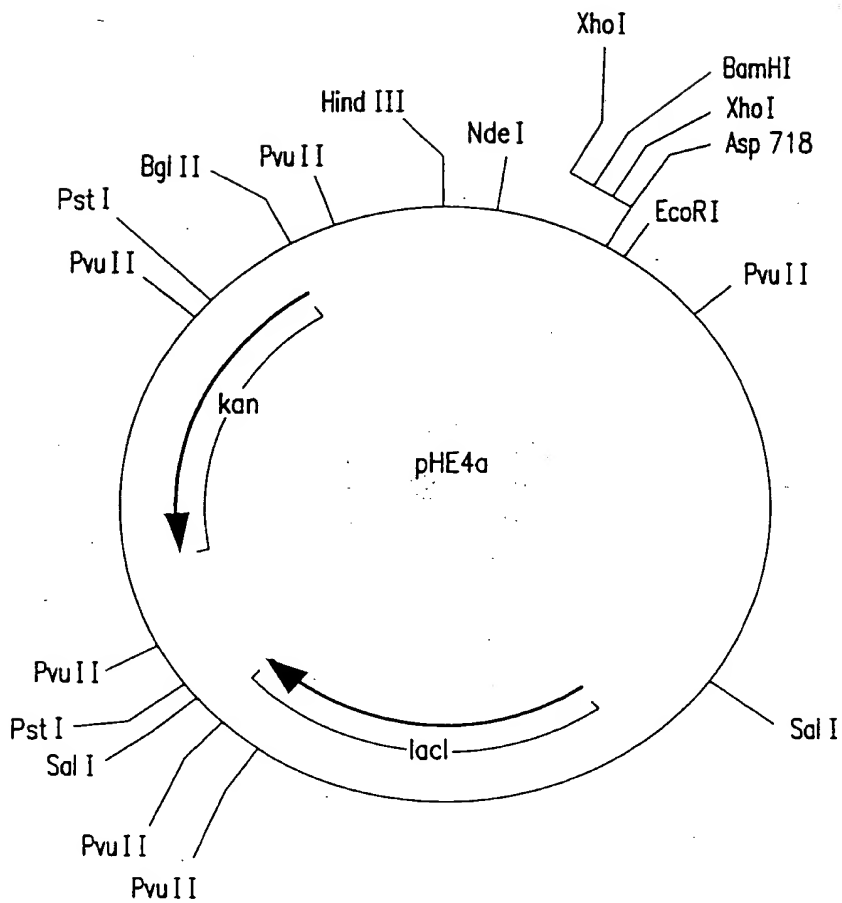


FIG.28

OPERATOR 1

-35

1 AAGCTTAAAACTGCCAAAATAAGTTTGACTTCGAGCGGATAAGAAAT

OPERATOR 2

-10

50 TAAGATGTACCCAATTGTCAGCGGATAACAATTTCACACATTAA

S/D

94 ACAGGAGAAATTA CATATG

FIG.29